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N-27708 - Reports about insects may come from farmers, county agents, or from Federal or State specialists. Here a survey entomologist examines catch of grasshoppers in his sweep net. The number caught help him to estimate degree of infestation.

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U. S. DEPARTMENT OF AGRICULTURE

Keeping an eye out for INSECTS

Throughout the nation volunteer and professional entomologists -- some 700 strong -- are keeping an eye out for enemy insects and reporting on insect activities. They are part of Insect Survey and Detection, a cooperative State-Federal "intelligence" system as vital to the defense of our crops and livestock as Army Intelligence is to the defense of our country.

About 30 States have cooperatively financed survey entomologists. These, together with scientists in Land-grant colleges, researchers at State and U. S. Department of Agriculture experiment stations, Extension Service specialists, county agricultural agents, and representatives of industry, funnel reports of insect activities along with specimens of insects to State clearing houses. The State clearing officer analyzes the reports and identifies any accompanying insect specimens. When necessary, he warns county agents and local control and regulatory officials of the presence of some insect new to the particular area or new to the United States and of the buildup of economic insect infestations.

The State officer then sends a weekly report of insect conditions to national headquarters -- the Plant Pest Control Division of the Agricultural Research Service in Washington D. C. Here the

reports are condensed and included in a weekly publication, the Cooperative Economic Insect Report. The information is organized under headings, such as Cereal and Forage, Fruit, Truck Crops, Forest and Ornamental, Stored Products, and Insects That Affect Man and Animals. Additional information, including informative articles on foreign insects, is also carried in the publication.

The Cooperative Economic Insect Report now reaches about 3,000 persons in Federal and State agencies, industries, farm editors, and other interested individuals. It alerts farmers and pest control officials to possible population increases of destructive insects and enables them to plan insecticide spraying or dusting, and other protective measures. Early detection can lead to early control, before extensive damage has been done, with minimum amounts of control chemicals and at the lowest possible cost.

The surveys and warnings that the reports contain, enable manufacturers to plan equipment and chemical inventories to meet farmer's insecticide needs. Research and education centers also find the data helpful in their work.

These photographs describe how the insect survey and detection system works.

U. S. DEPARTMENT OF AGRICULTURE
Office of Information

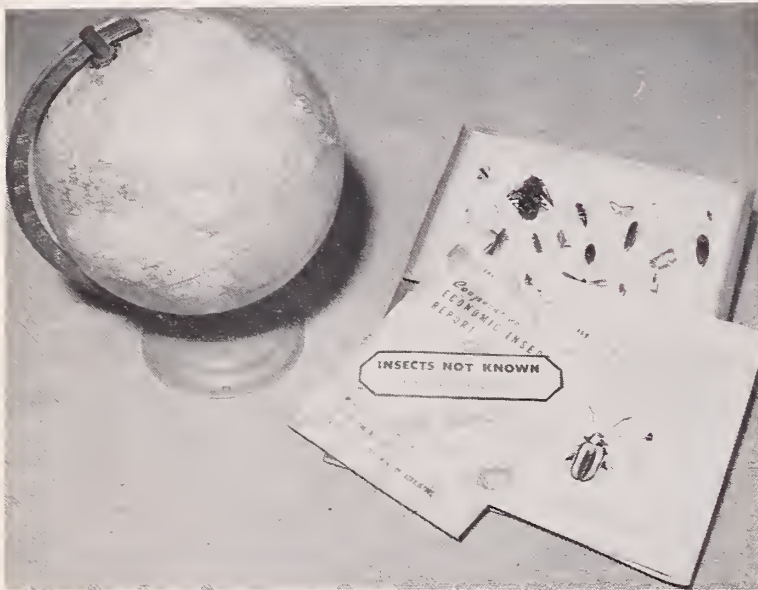
Picture Story No. 120
September 1959

Magazines and newspapers may obtain glossy prints of any of these photographs from the Photography Division, Office of Information, U. S. Department of Agriculture, Washington 25, D. C. Others may purchase prints (8 x 10) at \$1.00 each from the same address.



BN-8675-X

- This farmer examines the roots of soybean plants for damage from soil pests. He may find maggots, nematodes, or rootworms. Such pests are often hard to identify so he may ask the aid of his county agent. If the agent does not recognize the pest, he refers samples to specialists for positive determination.



N-33174 - Growth of international travel and fast transportation increases the danger of entry and spread of pests new to this country. USDA's plant pest control specialists prepared this publication "Insects Not Known to Occur in the United States" to help entomologists and others to recognize newly introduced pests.



N-33052 - Field observers estimate insect numbers and forecast the degree of infestation following methods outlined in this publication "Survey Methods." USDA's plant pest control experts have developed standardized survey methods for about 60 of the economically important insect pests.



N-18509 - Traps baited with chemical attractants are one way of detecting certain insects. Thousands of traps like this one are being used in Florida to protect our citrus industry against the Mediterranean fruit fly.



N-21934 - The male gypsy moth, a forest insect, is lured to traps like this by an attractant prepared from the abdominal tips of female gypsy moths. Traps are also used in surveys of the Mexican fruit fly, the Japanese beetle, and other pests.



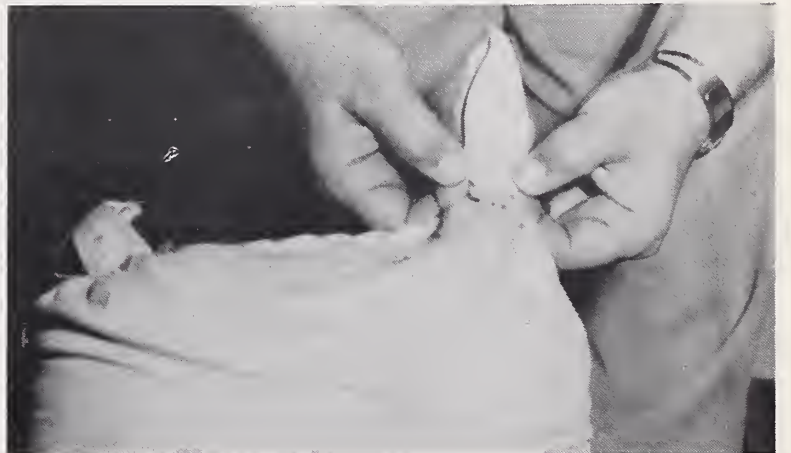
N-14848 - Moth catches in light traps placed in strategic places throughout several southern States tell what may be expected from such migrating pests as armyworm, corn earworm, fall armyworm, tobacco hornworm, and related insects.



N-9192 - To locate infestations of golden nematode of potato and soybean cyst nematode, soil samples are collected at mapped intervals. The samples are then taken to a laboratory where they are washed, screened, and examined under a microscope for presence of cysts. (Note: nematodes are tiny worms - - not insects)



TX-606 - Detection of this insect - - the white fringed beetle - - requires careful search of plant foliage for the beetle, or signs of its feeding. To locate the larvae of the beetle, survey scouts examine the soil around roots of preferred host plants.



N-14427 - The seams of burlap bags are a favorite hideout for the khapra beetle, a destructive stored grain pest. The pest also hides in cracks and crevices in grain storage buildings, which must be carefully searched by survey crews.



BN-8674 - X
- Cotton gin trash is screened through this machine and inspected for pink bollworm larvae. This is an important method of detecting the pest. Light traps are used in surveys for pink bollworm moth.



N-14841—Survey scouts collect a two-square yard sample of woods trash containing hibernating boll weevils. Counts of hibernating insect stages per lineal or area unit are used for estimating next season's infestations of European corn borer, grasshoppers, beet leafhopper, as well as boll weevil.



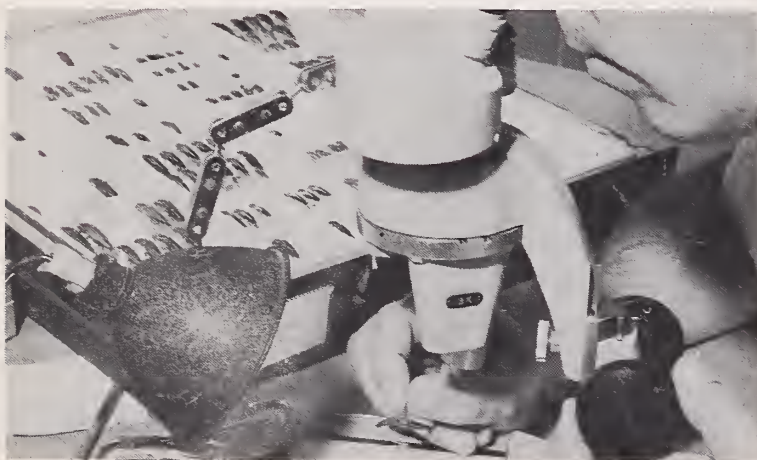
BN-33048—Information on insect conditions collected in these many ways reaches the Survey and Detection Operation of the Plant Pest Control Division in Washington, D. C. Here the reports from all parts of the United States are edited and summarized. Additional informative material on important domestic and foreign pests is also included.



N-10712—Populations of insects may be estimated by visible damage to host plants. Here the amount of defoliation of trees by gypsy moth larvae tells the trained survey entomologist the severity of the infestation.



N-33051—The weekly issue of the Cooperative Economic Insect Report is the end product of this effort. It contains information important to the defense of our food and fiber crops and livestock against destructive insects.



N-33173—Correct identification of collected specimens is important. The aid of highly trained State and Federal insect taxonomic specialists is frequently needed to identify unusual specimens, and the less known life stages of many of our common pests.



N-32948—Reports from field entomologists are abstracted and added to this permanent file, which contains information on over 40,000 domestic and foreign insect pest species. These records furnish valuable data on economic importance, distribution, biology, and the general history of a pest.